

IN THE CLAIMS

Please amend the claims 6, 11, 16, 17, 18, 19, 20, 21, and 26 to read as follows:

6. (Amended) In code division multiple access (CDMA) communication system, wherein packets of data are transmitted using a plurality of orthogonal code sequences and wherein each user of said code division multiple is allocated an orthogonal code sequence for communication on a traffic channel for transmitting variable rate packets of data symbols, an apparatus comprising:

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a channel packetizer for receiving said variable rate packets and, when a number of said data symbols included in ones of said variable rate packets exceeds a threshold value for splitting each of said ones of said variable rate packets into a traffic packet and at least one overflow packet;

a first modulator for receiving said traffic packet and for modulating said traffic packet in accordance with said orthogonal code sequence of said plurality of orthogonal code sequences and for modulating said orthogonal modulated traffic packet in accordance with a first pseudorandom noise (PN) sequence;

a second modulator for receiving said at least one overflow packet and for modulating said at least one overflow packet in accordance with an orthogonal code sequence of said plurality of orthogonal code sequences and for modulating said at least one orthogonal modulated overflow packet in accordance with at least one additional pseudorandom noise (PN) sequence wherein said at least one additional PN sequence is nonorthogonal to said first PN sequence; and

a transmitter for transmitting said traffic packet on said traffic channel and for transmitting at least one overflow packet on said at least one overflow channel.

11. (Amended) An apparatus for transmitting variable rate packets of data symbols comprising;

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means for receiving said variable rate packets and for dividing each of said variable rate packets including more than a threshold number of said data symbols into a traffic packet and into an overflow packet, each said traffic packet being provided to a

first packetizer output and each said overflow packet being provided to a second packetizer output;

means for receiving said traffic packet and for modulating said traffic packet in accordance with said orthogonal code sequence of a plurality of orthogonal code sequences and having a first output for providing said orthogonal code sequence modulated traffic packet;

means for receiving said orthogonal code modulated traffic packet and for modulating said orthogonal code modulated traffic packet in accordance with a first PN sequence;

means for receiving said overflow packet and for modulating said overflow in accordance with a second orthogonal code sequence of said plurality of orthogonal code sequences and having a second output for providing said orthogonal code modulated overflow packet;

means for receiving said orthogonal code modulated overflow packet and for modulating said orthogonal code modulated overflow packet in accordance with a second PN sequence which is non-orthogonal to said first PN sequence; and

a transmitter means having a first input coupled to said first modulator output and having a second input coupled to said second modulator output, said transmitter further having an output.

16. (Amended) An apparatus for transmitting variable rate packets of data symbols comprising;

a channel packetizer having an input for receiving said variable rate packets and for dividing each of said variable rate packets including more than a threshold number of said data symbols into a traffic packet and into an overflow packet, each said traffic packet being provided to a first packetizer output and each said overflow packet being provided to a second packetizer output;

a first modulator having an input for receiving said traffic packet and for modulating said traffic packet in accordance with said orthogonal code sequence of a

plurality of orthogonal code sequences and having a first output for providing said orthogonal code sequence modulated traffic packet;

a first PN modulator having an input for receiving said orthogonal code modulated traffic packet and for modulating said orthogonal code modulated traffic packet in accordance with a first PN sequence;

a second modulator having an input for receiving said second packet and for modulating said traffic packet in accordance with a second orthogonal code sequence of said plurality of orthogonal code sequences and having a second output for providing said orthogonal code modulated traffic packet;

a second PN modulator having an input for receiving said orthogonal code modulated overflow packet and for modulating said orthogonal code modulated overflow packet in accordance with a second PN sequence which is non-orthogonal to said first PN sequence; and

a transmitter having a first input coupled to said first modulator output and having a second input coupled to said second modulator output, said transmitter further having an output.

17. (Amended) The apparatus of Claim 16 wherein the first PN modulator and the second PN modulator is responsive to a rate signal.

18. (Amended) The apparatus of Claim 16 further comprising a receiver for receiving speech samples and a compressor for compressing said speech samples in accordance with a variable rate vocoder format to provide said variable rate packets.

19. (Amended) The apparatus of Claim 18 further comprising an error correction coder for coding said variable rate packets.

20. (Amended) The apparatus of Claim 16 further comprising an interleaver for interleaving said variable rate packets.

21. (Amended) An apparatus for transmitting variable rate packets of data symbols comprising:

a channel packetizer having an input for receiving said variable rate packets and for dividing each of said variable rate packets including more than a threshold number of said data symbols into a traffic packet and into an overflow packet, each said traffic packet being provided to a first packetizer output and each said overflow packet being provided to a second packetizer output, said channel packetizer responsive to a rate signal;

a first modulator having an input for receiving said traffic packet and for modulating said traffic packet in accordance with said orthogonal code sequence of a plurality of orthogonal code sequences and having a first output for providing said orthogonal code sequence modulated traffic packet;

a first PN modulator having an input for receiving said orthogonal code modulated traffic packet and for modulating said orthogonal code modulated traffic packet in accordance with a first PN sequence;

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a second modulator having an input for receiving said overflow packet and for modulating said overflow packet in accordance with a second orthogonal code sequence of said plurality of orthogonal code sequences and having a second output for providing said orthogonal code modulated overflow packet;

a second PN modulator having an input for receiving said orthogonal code modulated overflow packet and for modulating said orthogonal code modulated overflow packet in accordance with a second PN sequence which is non-orthogonal to said first PN sequence; and

a transmitter having a first input coupled to said first modulator output and having a second input coupled to said second modulator output, said transmitter further having an output.

26. The apparatus of Claim 25, wherein said traffic demodulator further comprises:

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an orthogonal traffic sequence generator for generating a traffic sequence; and

an orthogonal traffic despreader for receiving said demodulated traffic packet and desreading said demodulated traffic packet using said traffic sequence, wherein said overflow demodulator further comprises:

an orthogonal overflow sequence generator for generating an overflow sequence; and

an orthogonal overflow desreader for receiving said demodulated overflow packet and desreading said demodulated overflow packet using said overflow sequence.

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